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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte HARRY CONTOPANAGOS and CHRISTOS KOMNINAKIS

Appeal 2017-002984¹
Application 14/085,128
Technology Center 3900

Before ROBERT E. NAPPI, SCOTT E. BAIN, and
ALEX S. YAP, *Administrative Patent Judges*.

YAP, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1–41, which are all the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

¹ According to Appellants, the real party in interest is Broadcom Corporation. (App. Br. 4.)

STATEMENT OF THE CASE

Introduction

Appellants' claimed invention "relates generally to integrated circuits and more particularly to components that comprise an integrated circuit." (US 6,709,977 B2 ("Spec."), 1:6–8.) Claim 1 is illustrative, and is reproduced below (with minor reformatting):

1. A method for manufacturing an integrated circuit comprises:
 - creating a layer; and
 - creating, on and within the layer, an electrical element having a geometric shape that exceeds prescribed integrated circuit manufacture limits, wherein the electrical element includes at least one non-conducting region that negligibly effects electrical characteristics of the electrical element and provides adequate non-conducting spacing in accordance with the prescribed integrated circuit manufacture limits.

Rejection on Appeal

Claims 1–41 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. (*See* Final Office Action (mailed February 9, 2016) ("Final Act.") 8–9.)²

² The Examiner withdrew the prior art rejections (Final Act. 9–12) in the Answer (Ans. 3).

ANALYSIS

We have reviewed the Examiner's rejections in light of Appellants' arguments that the Examiner has erred. We disagree with Appellants' conclusions.

The Examiner finds the claims indefinite because the following terms are indefinite:

- “in accordance with the prescribed integrated circuit manufacture limits;”
- “negligibly [e]ffects the electrical characteristics of the electrical element;” and
- “provides adequate non-conducting spacing.”

(Final Act. 8–9.)

“in accordance with the prescribed integrated circuit manufacture limits”

The Examiner finds the term indefinite “because it is unclear what the ‘*prescribed integrated circuit manufacture limits*’ [and, therefore,] one of ordinary skill in the art cannot ascertain whether those limits have been exceeded.” (Final Act. 8–9.) Appellants contend that a person of ordinary skill in the art “would know the ‘prescribed integrated circuit manufacturing limits’ for a particular foundry, and as such, would know whether these limits are exceeded.” (App. Br. 10; Reply 2.) Appellants also point to column 2, lines 58 to 62 of the Specification for an example of “manufacturing limits.” (App. Br. 10.)

Appellants have not persuaded us of Examiner error. Section 112, second paragraph, requires that “[t]he specification . . . conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” “As the statutory

language of ‘particular[ity]’ and ‘distinct[ness]’ indicates, claims are required to be cast in clear—as opposed to ambiguous, vague, indefinite—terms.” *In re Packard*, 751 F.3d 1307, 1313 (Fed. Cir. 2014) (alterations in original);³ *see also In re Hammack*, 427 F.2d 1378, 1382 (CCPA 1970) (“the essence of [the] requirement [under 35 U.S.C. § 112, second paragraph] is that the language of the claims must make it clear what subject matter they encompass.”). Here, according to Appellants, it does not matter that the manufacturing limits can differ from foundry to foundry and change over time even in the same foundry as long as a person of ordinary skill in the art working in a particular foundry would know what the term means. (Reply 10–11.) Even *assuming arguendo* that Appellants’ contention, which is *not* supported by the evidence, is correct, there is still no objective measure as to what are the “prescribed integrated circuit manufacturing limits.” *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (holding that mere attorney argument that is unsupported by factual evidence is entitled to little probative value); *In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984). Moreover, even the example in the Specification cited by Appellants for support that the Specification provides examples of “manufacturing limits”

³ Our reviewing court has held that when the USPTO has initially issued a well-grounded rejection that identifies ways in which the language in a claim is ambiguous, vague, incoherent, opaque, or otherwise unclear in describing and defining the claimed invention, and thereafter the applicant fails to provide a satisfactory response, the USPTO can properly reject the claim as failing to meet the statutory requirement that the claims be definite. *See In re Packard*, 751 F.3d at 1313–14. The court explained a satisfactory response can take the form of modification of the language identified as unclear, a separate definition of the unclear language, or, in appropriate circumstances, “persuasive explanation for the record of why the language at issue is not actually unclear.” *Id.* at 1311.

is vague and ambiguous: “For example, . . . the width of the electrical element may be at least 50 microns when the electrical element 12 is used for an inductor.” (App. Br. 10 (citing Spec. 2:58–62), original emphasis omitted, underline added.) In this example, when an electrical element is used for an inductor, the width of the electrical element may be at least 50 microns but it also need not be. In other words, according to the Specification, the manufacturing limit for the width of an electrical element that is used for an inductor can be anything.

“negligibly effects electrical characteristics of the electrical element”

The Examiner finds the term indefinite “because it depends on the application of the integrated circuit” as “the effect of the non-conducting region for one application may be negligible whereas for another application the affect may be appreciable.” (Final Act. 9.) Appellants contend Examiner error because “read in light of the [S]pecification, a POSA would understand the claimed ‘*non-conducting region . . . that negligibly effects electrical characteristics of the electrical element*’ is based on the electrical element, not the application of the integrated circuit.” (App. Br. 12–13.) Appellants further contend that “a person of ordinary skill in the art would understand the claim features ‘*negligibly affects the electrical characteristics of the electrical element*’ to mean having an effect that is ‘of so little consequence as to warrant little or no attention.’” (*Id.* at 13.)

Appellants, however, have not persuaded us of Examiner error and we adopt as our own the findings and reasons, for this issue, set forth by the Examiner in the action from which this appeal is taken and the reasons set forth by the Examiner in the Examiner’s Answer in response to Appellants’ Appeal Brief. (Ans. 7–10.) However, we highlight and address specific

findings and arguments for emphasis as follows. First, even *assuming arguendo* that the “‘*electrical characteristics of the electrical element*’ is based on the electrical element, [and] not the application of the integrated circuit,” (App. Br. 12) we agree with the Examiner’s findings that the effect on the non-conducting region would be different depending upon the electrical element. (Ans. 8–9.) For example, “the effect of a non-conducting region of an electrical element in an inductor may be *negligible* whereas the effect of the same non-conducting region in an electrical element of a capacitor may be *appreciable*,” therefore, one of ordinary skill in the art would not be able to ascertain the scope of the term at issue. (*Id.* at 9, emphasis added.) We are also not persuaded by Appellants’ further contention that “in the ordinary course of their practice, a [person of ordinary skill in the art] would have the knowledge to make a determination as to whether or not the non-conducting region ‘*negligibly affects*’ the electrical characteristics of the electrical element” (Reply 7) because Appellants’ assertion in this regard is mere attorney argument and a conclusory statement, which is unsupported by evidence in the record. *In re Geisler*, 116 F.3d at 1470; *In re De Blauwe*, 736 F.2d at 705.

Second, even *assuming arguendo* that Appellants’ construction of the term “negligibly” is correct, *i.e.*, “of so little consequence as to warrant little or no attention” (App. Br. 13), the term would still be indefinite because it is unclear where the line is drawn separating something of “little consequence as to warrant little or no attention” versus something more than that. Furthermore, as discussed above, the line will be different depending on the electrical element. We are, therefore, not persuaded by Appellants’ attorney argument that “a POSA would have the knowledge to make a determination

as to whether or not the non-conducting region ‘*negligibly affects*’ the electrical characteristics of the electrical element” because this contention is not supported by the evidence in the record.

“provides adequate non-conducting spacing”

The Examiner finds the term indefinite “because the [S]pecification does not provide a test/description as to how one of ordinary skill in the art determines whether the non-conducting space is adequate [and] a review of the prior art reveals little, if any, guidance as to determine the adequacy of the nonconducting space.” (Final Act. 9.) Appellants present arguments similar to the “in accordance with the prescribed integrated circuit manufacture limits” term discussed above. (App. Br. 14–16; Reply 8–11.) Therefore, based on the discussions above, Appellants have similarly not persuaded us of Examiner error.

For the foregoing reasons, we are not persuaded the Examiner erred in rejecting claim 1 and thus, we sustain the 35 U.S.C. § 112, paragraph 2 rejection of claim 1. Appellants do not make any separate, substantive patentability arguments regarding independent claims 12 and 24, and dependent claims 2–11, 13–23, and 25–41, but instead rely solely on their arguments with respect to claim 1. (App. Br. 9–16.) Therefore, we also sustain the 35 U.S.C. § 103(a) rejections of claims 2–41.

DECISION

We affirm the decision of the Examiner to reject claims 1–41.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED